Patent Claims

1.   Method for optimizing emission of broadband transmission pulses of a pulse echo method, wherein the transmission pulses are transmitted with a preselected pulse repetition frequency (TAKT), characterized in that the polarity of a pulse is switched with each cycle of the pulse repetition frequency (TAKT), depending on a random sequence (PNCode).

2.   Method for optimizing emission of broadband transmission pulses of a pulse echo method, wherein the transmission pulses are transmitted with a preselected pulse repetition frequency (TAKT), characterized in that individual pulses are suppressed with each cycle of the pulse repetition frequency (TAKT), depending on a random sequence (PNCode).

3.   Method as claimed in one of the claims 1 or 2, characterized in that the pulse repetition frequency (TAKT) is constant.

4.   Method as claimed in one of the claims 1 or 2, characterized in that the pulse repetition frequency (TAKT) is additionally jittered.

5.   Method as claimed in one of the preceding claims 1, 2, 3 or 4, characterized in that the pulse form of the transmission pulse is of any shape.

6.   Circuit for optimizing emission of broadband transmission pulses of a pulse echo method, characterized in that the circuit comprises two transmission signal generators (Senders A, B) of differing polarity,

between whose output signals switching occurs back and forth, depending on a produced, random sequence (PNCode).

7.   Circuit for optimizing emission of broadband, transmission pulses of a pulse echo method, characterized in that the circuit comprises two transmission signal generators (Senders A, B) of differing polarity, which are switched in and out, depending on a produced, random sequence (PNCode).

8.   Circuit for optimizing emission of broadband transmission pulses of a pulse echo method, characterized in that the circuit comprises a transmission signal generator (Sender C) which can be switched in its polarity and which is switched, depending on a produced, random sequence (PNCode).

9.   Circuit as claimed in one of the claims 6, 7 or 8, characterized in that the random sequence (PNCode) is a PN-code sequence produced by a PN-code generator circuit (10).

10.   Circuit as claimed in claim 9, characterized in that the PN-code generator circuit (10) comprises a multi-stage, shift register (Q1-Qn) having feedback taps.

11.   Circuit as claimed in claim 10, characterized in that the circuit includes an XOR-gate for the feedback taps.